

REMARKS

Claims 1-7 are pending in this application. By this Amendment, claim 1 is amended, and claim 3 is canceled. Claims 1, 2, and 4-7 are now pending in this application. Claim 8 is withdrawn from consideration as being directed to a non-elected invention.

I. Rejection of Claims under 35 U.S.C. §102

A. Claims 1-7 stand rejected under 35 U.S.C. §102(b) as being anticipated by Sotomura (US 2003/0091889).

The rejection of claim 3 is respectfully traversed.

Independent claim 1 includes a potential providing step of providing a precursor layer containing the catalyst with a potential higher than 1.3 V with reference to a standard hydrogen electrode, so as to form the catalyst layer. Claim 3 delineates that the potential higher than 1.3V provided in the potential providing step is provided by potential sweeping.

The Office Action contends that Sotomura discloses the feature of claim 3 at paragraph [0054]. This paragraph describes:

Further, when the electrochemical catalyst A and/or the catalyst B are subjected to electrochemical deposition or electrolytic polymerization, the catalyst layer can be formed by depositing the electrochemical catalyst A and/or the catalyst B using the electrochemical method such as a potentiostatic method, a galvanostatic method or a potential sweep method. ...

The example of Sotomura describes that in an electrolytic solution into which CoTAPc was dissolved, "Electrolysis was repeatedly carried out by increasing and decreasing the potential of GC within *plus* 0.5 V to *minus* 1.4 V (emphasis added) against the potential of the Ag/AgCl reference electrode at a rate of 50 mV/s by 30 cycles, and p-CoTAPc was formed on the GC" (see paragraph [0059] of Sotomura). In particular, Sotomura discloses carrying out electrolysis in phthalocyanine solution to deposit phthalocyanine on the GC.

The disclosure of the present application relates to retaining, in an acidic liquid, an electrode already comprising a catalyst, such as metal complex having a porphyrin ring or

phthalocyanine ring, and *carrying out potential sweep to it for catalyst activation*. The difference between what is disclosed in Sotomura and to what the disclosure of the present application relates inevitably leads to the difference in the potential sweep (claim 3) of providing the potential higher than 1.3 V (claim 1). More specifically, Sotomura carries out potential sweep "within *plus* 0.5 V to *minus* 1.4 V," whereas claim 3 delineates that the *potential higher than 1.3 V* provided in the potential providing step (claim 1) is provided by potential sweeping. The potential higher than 1.3 V provided by potential sweeping clearly is on a positive voltage side. This is consistent with the description in Applicants' application that the potential provided (via potential sweeping) oxidizes and eliminates impurities in the precursor layer and improves the conductivity of the catalyst (see, for example, paragraph [0012] of Applicants' application).

Sotomura does not disclose or suggest providing the catalyst of a precursor layer with a potential *higher* than 1.3V (positive voltage) by potential sweeping. Further, as Sotomura discloses only that electrolysis was repeatedly carried out by increasing and decreasing the potential of GC within *plus* 0.5 V to *minus* 1.4 V (i.e., a range of + 0.5 V to - 1.4 V), a range of voltage that is clearly less than 1.3 V (positive), it is incorrect for the Office Action to contend that Sotomura inherently teaches a potential higher than 1.3 V (positive) or 1.6 V (positive) or less with reference to a standard hydrogen electrode (i.e., $+ 1.3 \text{ V} < \text{potential} \leq + 1.6 \text{ V}$). More specifically, a range of voltage of + 0.5 V to - 1.4 V cannot reasonably be interpreted as inherently including a range of voltage of $+ 1.3 \text{ V} < \text{potential} \leq + 1.6 \text{ V}$.

To expedite prosecution, independent claim 1 is amended to include the limitation of claim 3, now canceled. All the features recited in independent claim 1 are not expressly or inherently described in Sotomura. Therefore, independent claim 1 is patentable over Sotomura.

Because claims 2 and 4-7 depend directly or indirectly from claim 1, they are patentable over Sotomura for at least the reasons discussed above, as well as for the additional features they recite. Therefore, reconsideration of the rejection and allowance of claims 1, 2, and 4-7 are respectfully solicited.

II. Rejoinder

If independent claim 1 is allowed, claim 8 will refer to an allowed claim. In such case, withdrawal of the restriction requirement as to claim 8, as well as its allowance are respectfully solicited (see MPEP § 821.04 Rejoinder).

III. Conclusion

In view of the foregoing, it is respectfully submitted that this application is in condition for allowance. Favorable reconsideration and prompt allowance of the claims are earnestly solicited.

Should the Examiner believe that anything further would be desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact the undersigned at the telephone number set forth below.

Respectfully submitted,


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Attachment:
Petition for Extension Time

Date: November 5, 2009

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